REMARKS/ARGUMENTS

This responds to the issues raised in the Official Action of April 28, 2009, a Final Rejection, and accompanies a Request for Continued Examination.

Claims 1, 2, 4-9, 13, 14, 18, 20 and 21 are pending in the application. Applicants address the issues raised in the outstanding Official Action in the order presented.

Response to Provisional Obviousness-Type Double Patenting Rejection

Claims 1, 2, 4-6 and 13 are provisionally rejected over claims 16 and 19-21 of co-pending application Serial No. 10/468,742. As in the past, applicants hold response to this provisional rejection in abeyance until such time as claims are indicated to be allowable either in this application, the referenced application or both.

Response to Objection to the Claims

Claim 2 is objected to as being improperly dependent from claim 1. In response to this "germanium" has been deleted from claim 2 thus resolving this objection.

Response to Claim Rejections - 35 USC §103

In a series of four separate rejections (items 7-10) the Examiner has maintained the obviousness objections over Canham (WO 02/067998) in view of Nsereko et al (Biomaterials 2002) and further in view of Canham (US 6,322,895) and also over Canham (WO 02/067998) in view of Straub (US 6,610,317).

The Examiner's argument (at page 6 of the Official Action) that the reconstruction is proper as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from the applicant's disclosure seems to be incorrect and inconsistent with the facts. If anything it is based on conjecture. It remains applicants' position that the average skilled person in the art simply would not arrive at the Examiner's proposed constructions without knowledge of the present invention:

Nsereko describes the localized delivery of paclitaxel in solid tumors from chitin microparticle formulations. The Examiner asserts that as Nsereko discusses administration at the tumor site as a way of enhancing the activity of chemotherapeutic agents such as paclitaxel (page 2723, column 2, lines 1-4), it would have been obvious to the average skilled person to apply this teaching to the silicon containing anti-cancer compositions of Canham (WO 02/067998) so as to

arrive at the presently claimed invention.

Applicants do not accept this assertion. Firstly, Nsereko is concerned with an entirely different type of delivery system to that of the present invention; unlike the Examiner, the average skilled person would in no way consider the chitin microparticles of Nsereko and the silicon microparticles of Canham to be functionally equivalent. Although chitin and silicon might both be biodegradable, there is nothing to suggest that they would degrade at the same rate, so the release rate of the drug would be expected to be different in the two formulations.

Following on from this, it would not be possible to predict from the chitin studies of Nsereko what dose of cytotoxic agent in a silicon microparticle formulation could be safely and effectively delivered intratumorally. Nsereko refers to localized delivery of anti-tumor drugs decreasing the incidence of side effects commonly observed with systemic therapy (page 2723, column 2, paragraph 1) which the Examiner appears to interpret as teaching that a much higher dosage of active ingredient can be administered. Applicants disagree -- the skilled person would see the advantage of localized delivery in affording the possibility of *reducing* the dose while still achieving a sufficiently effective concentration at the tumor, not in allowing the administration of doses at levels which would normally be expected to kill 50% of the patients treated.

Nsereko in no way suggests that a dose higher than the LD_{50} of the free drug (and as high as up to 2 x LD_{50} of the free drug as in the present invention) could be administered and so in no way could the present invention be said to be obvious. The ability to deliver such high doses without significant mortality represents a completely unexpected and significant advantage for the silicon microparticle formulations of the present invention which could not have been predicted from the prior art available at the time of making the present invention.

Similar arguments apply in respect of the rejection over Canham et al and Nsereko et al further in view of Canham (US 6,322,895) and to the rejection over Canham (1998) in view of Straub (US 6,610,317). The porous matrix of Straub would not be considered by the average skilled person in any way functionally equivalent to silicon microparticle loaded formulations and so there would simply be no motivation to arrive at the present invention. The average skilled man would not consider the direct tumoral administration of the compositions of Straub relevant to the use of porous silicon particles loaded with cytotoxic agent and would not be able

to draw any conclusions from Straub as to the dose of silicon microparticle loaded cytotoxic agent which would be safely and effectively delivered.

For the above reasons it is respectfully submitted that the claims of this application define inventive subject matter. Reconsideration and allowance are solicited. Should the examiner require further information, please contact the undersigned.

Respectfully submitted,

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